

**Figure 1A**

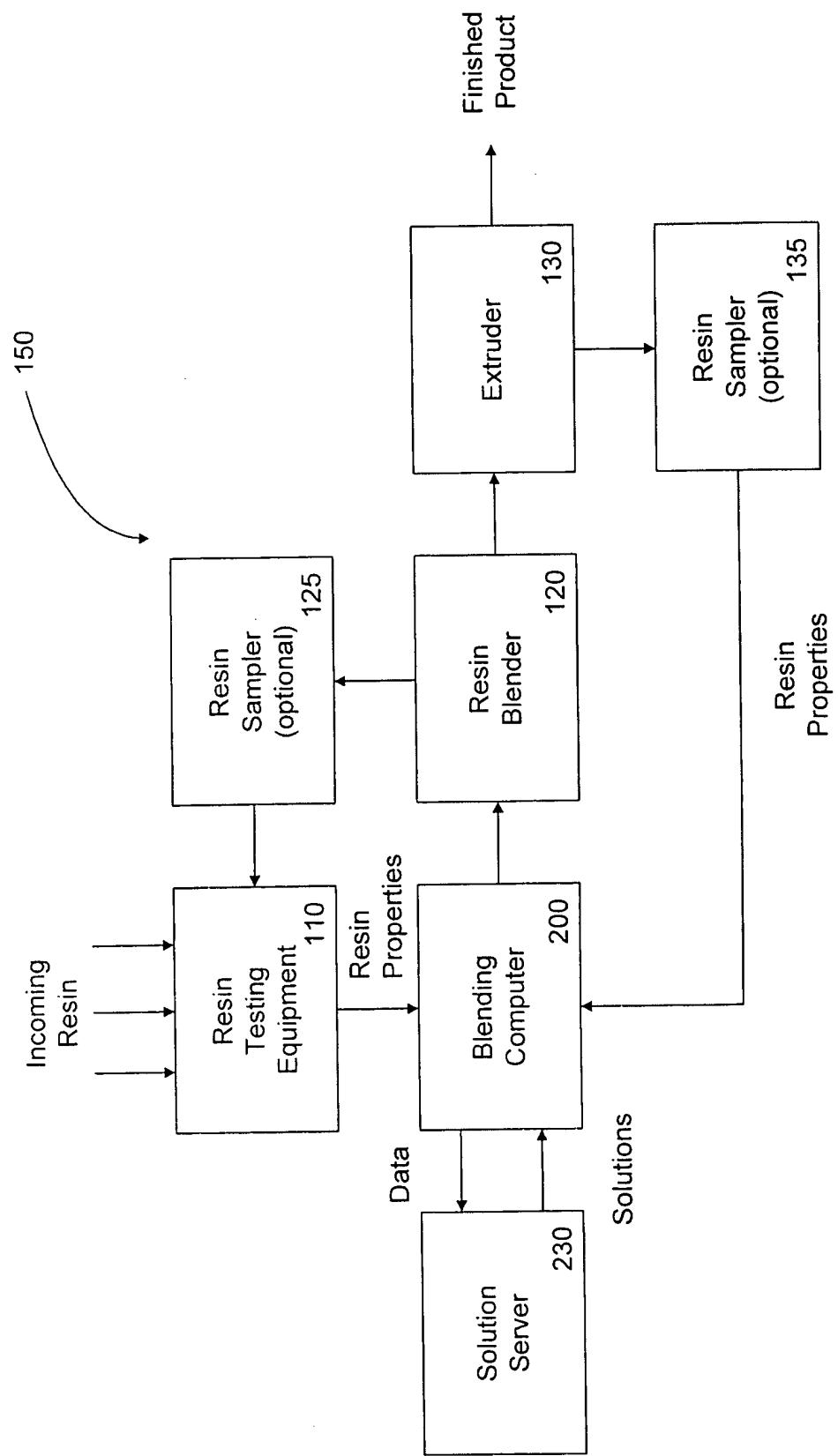


Figure 1B

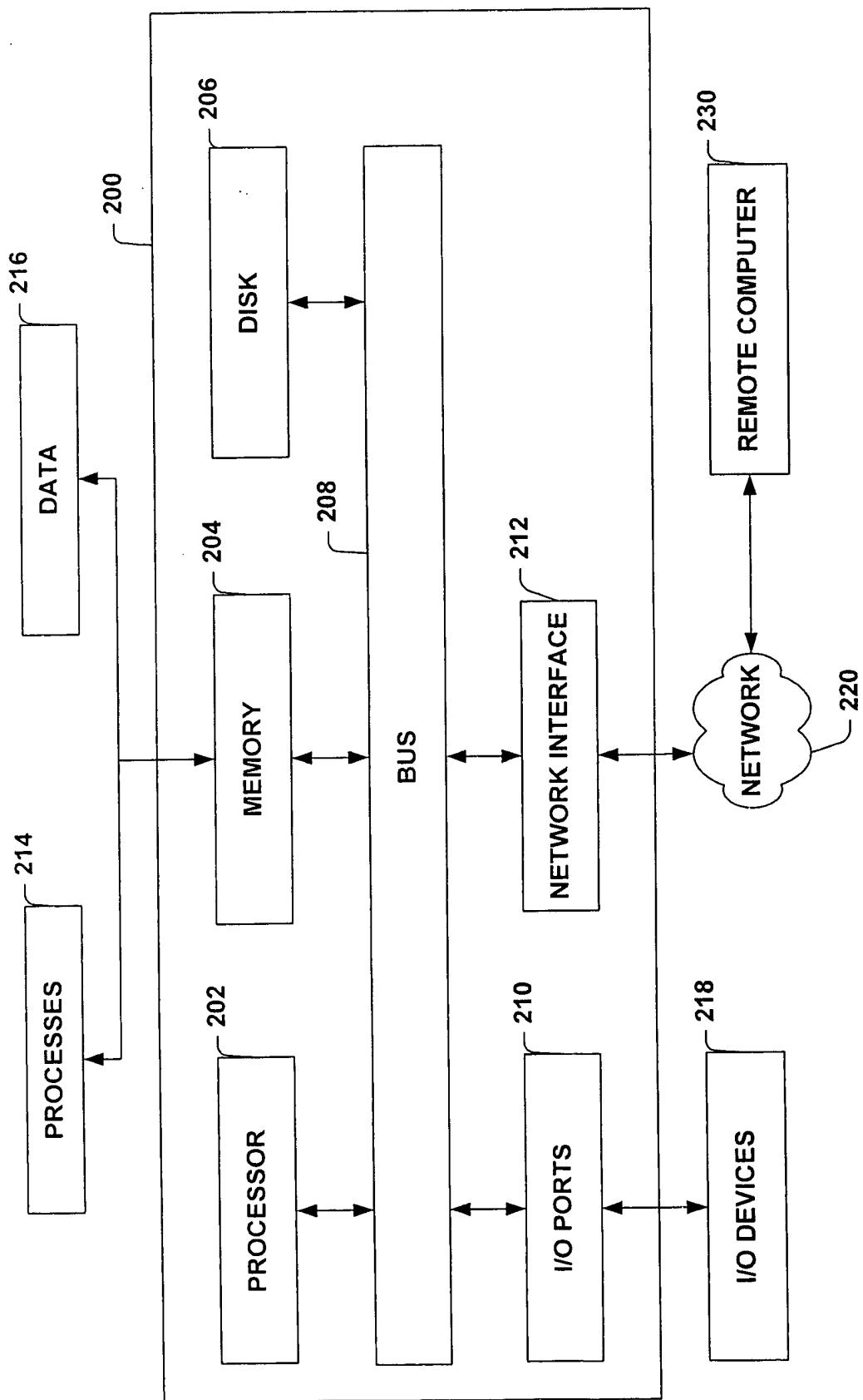
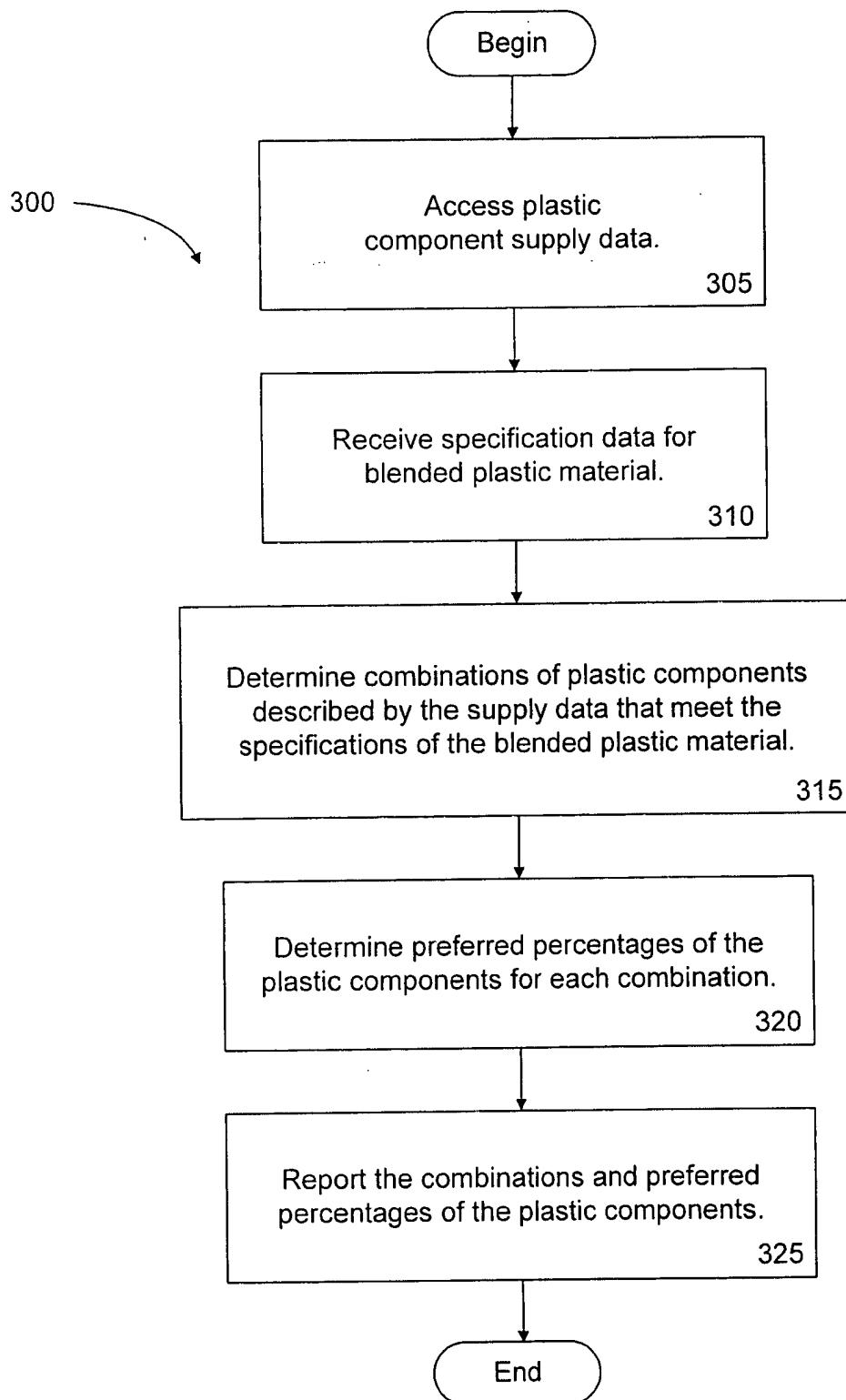


Figure 2



**Figure 3**

400

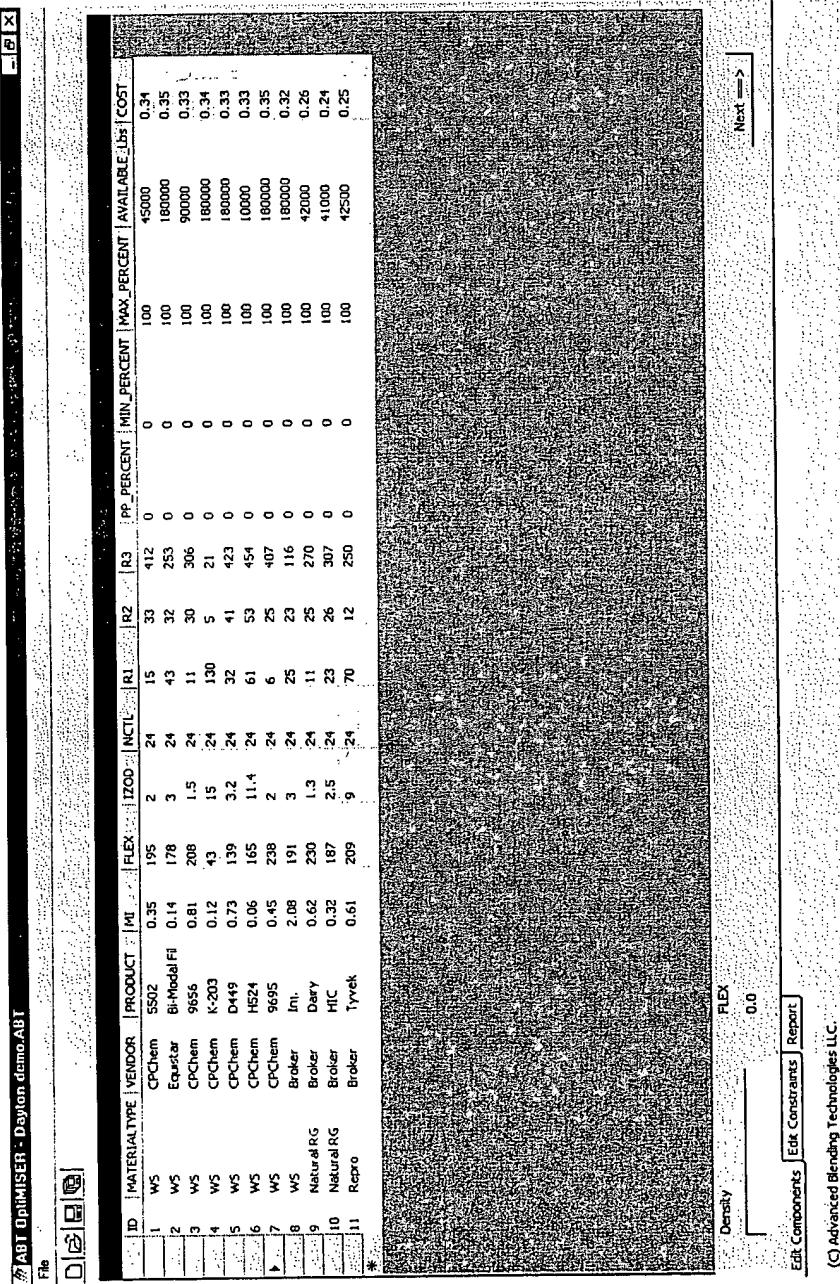


Figure 4

500

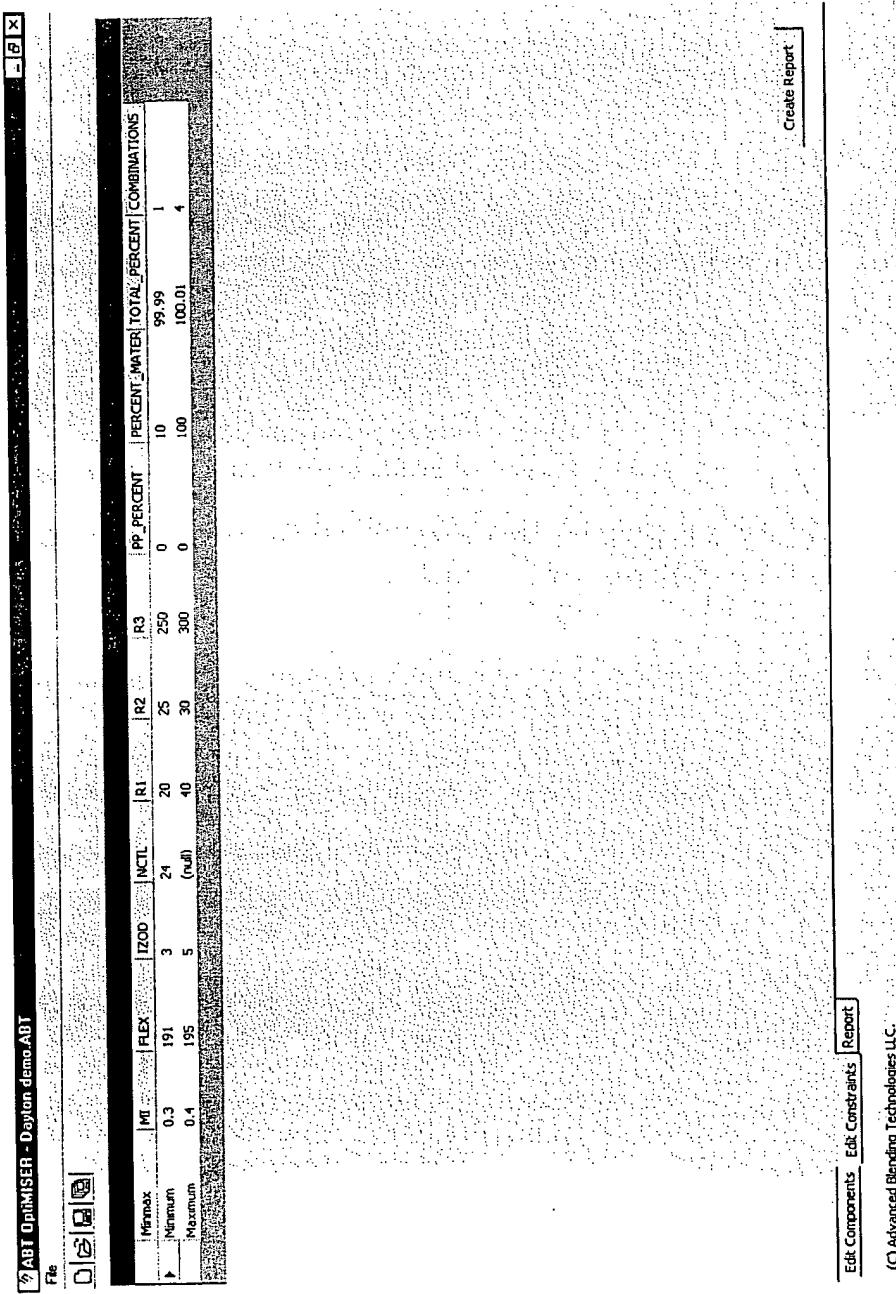


Figure 5

600

610

ABT Optimiser - Dayton demo ABT

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(C) Advanced Blending Technologies LLC.

SolnID	M1	FLEX	DENSITY	ITOD	INCL	R1	R2	R3	IPP_PERCENT	COST	Lbs
1	0.346	191	0.9531	3	24	32.274	25	289.961	0	0.2664	60927
2	0.315	193	0.9534	3	24	33.892	25	281.956	0	0.2685	79867
3	0.314	194	0.9536	3.01	24	31.147	25	300	0	0.2711	59163
4	0.323	191	0.953	3.24	24	34.604	25	300	0	0.2717	79044
5	0.362	191	0.953	3	24	27.877	30	295.357	0	0.2717	58103
6	0.387	191	0.953	3	24	25.803	28	300	0	0.2775	69697
7	0.361	195	0.9539	3.03	24	40	25	263.33	0	0.2788	68606
8	0.344	192	0.9533	3	24	36	29.352	272.755	0	0.2904	42737
9	0.4	195	0.9539	3.25	24	40	25.941	281.643	0	0.2952	153426
10	0.3	191	0.953	3	24	37.417	27.04	297.476	0	0.2994	55053
11	0.4	195	0.9539	3.68	24	40	23.157	293.386	0	0.3121	130021
12	0.344	195	0.9539	3.63	24	40	29.303	300	0	0.3155	72315
13	0.335	195	0.9539	3.45	24	40	26.134	300	0	0.3156	143932
14	0.3	195	0.9539	3.09	24	40	26.706	293.091	0	0.3162	200763
15	0.4	194	0.9537	3.31	24	40	25.78	251.377	0	0.318	175733
16	0.347	195	0.9539	3.2	24	40	26.349	268.479	0	0.3187	168689
17	0.357	195	0.9539	3.53	24	40	25.411	250	0	0.3247	211980
18	0.4	191	0.953	3.88	24	34.631	28.071	298.248	0	0.3368	49841
19	0.4	191	0.953	3.25	24	32.567	30	252.211	0	0.3372	90355

Figure 6

700

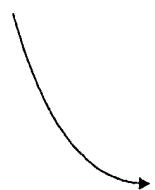
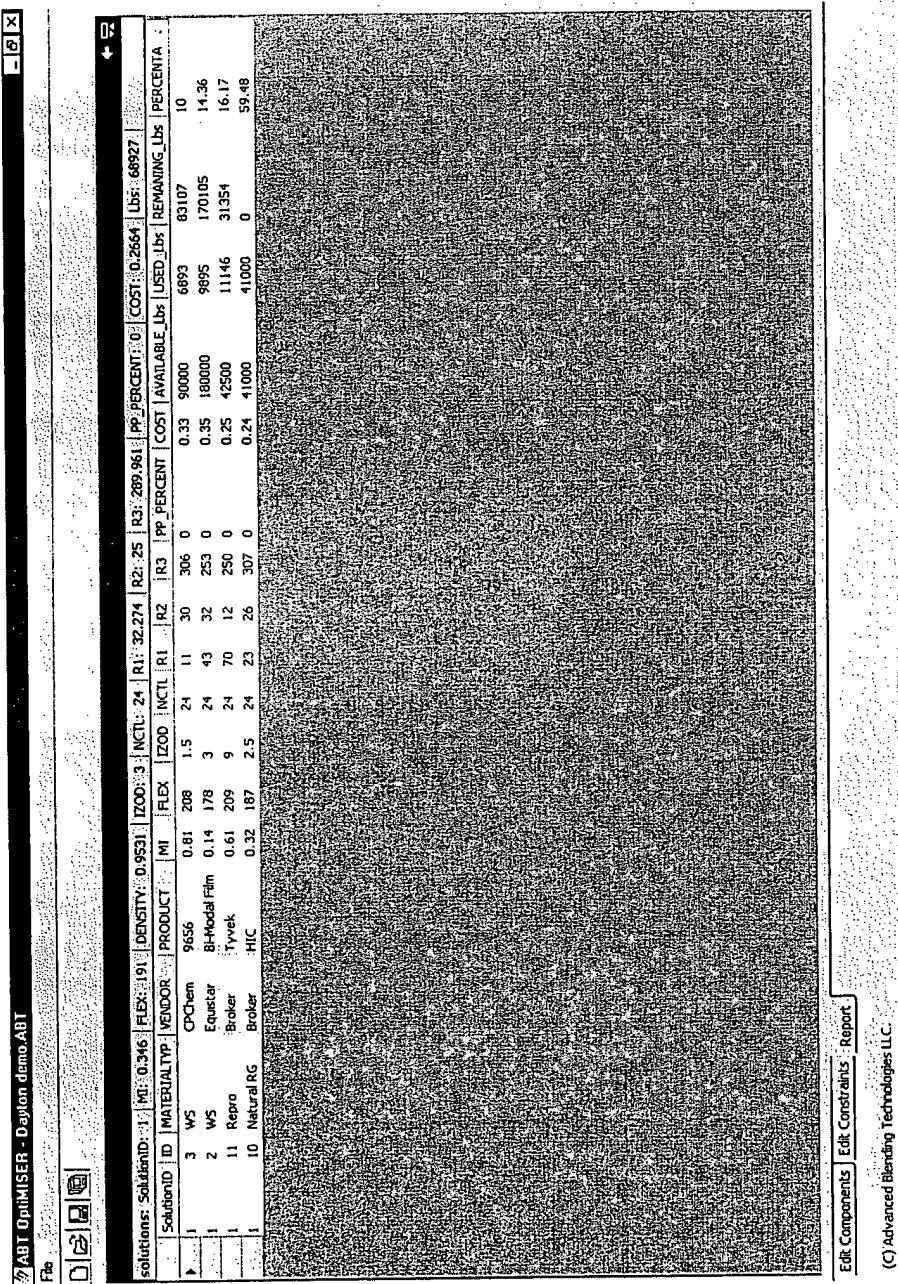
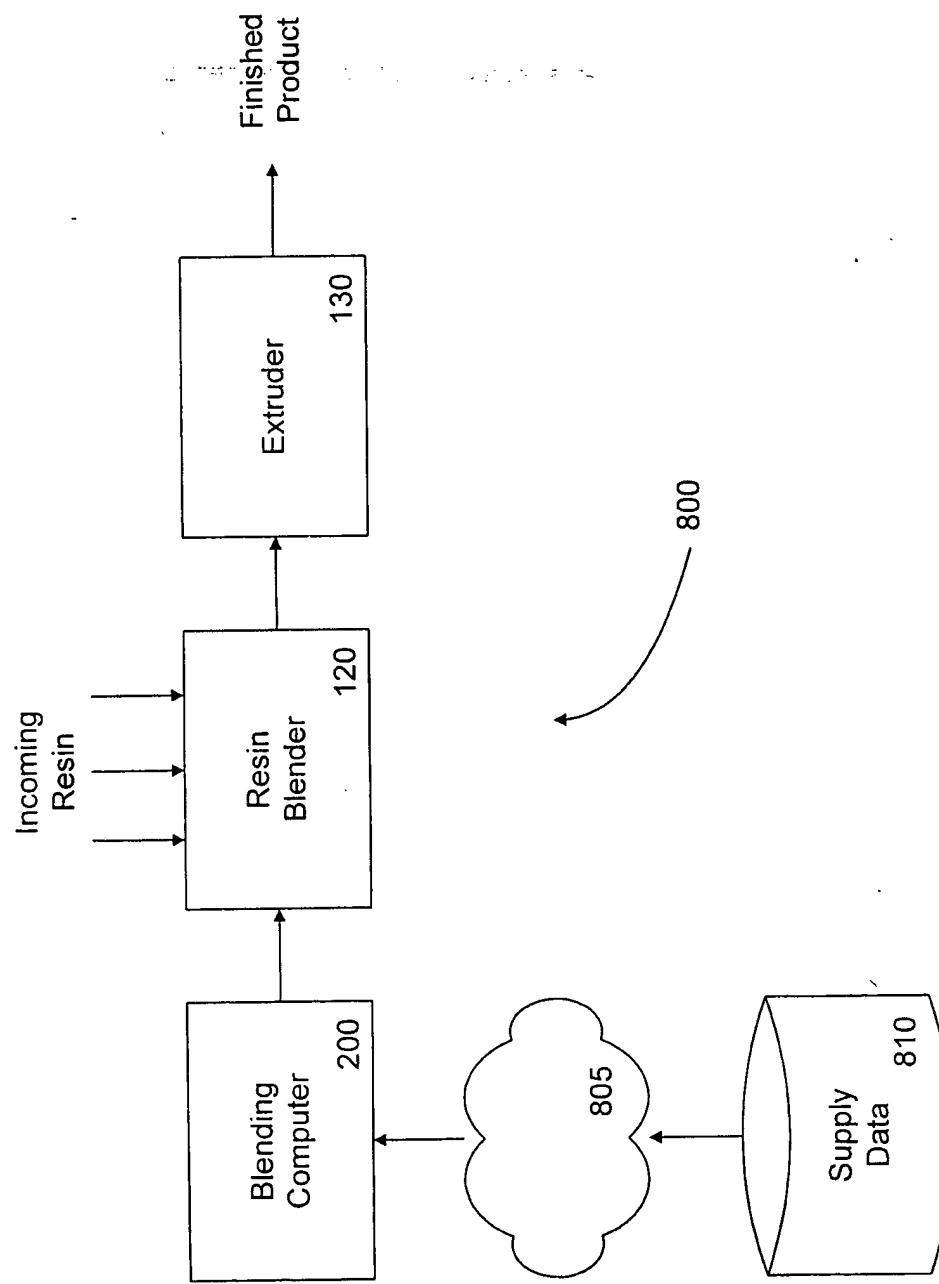



Figure 7



**Figure 8**

ID	Material Type	Vendor	Product	Min	Flex	Max	R1	R2	R3	RP Percent	Min Percent	Max Percent	Available	Cost
1	Prime	Equistar	4689	0.14	178	3	102	43	32	180	0	0	100	180000
2	Prime	CPChem	9656	0.46	201	2:1	27	15	30	306	0	0	100	90000
3	Prime	Exxon	249	0.34	139	3.2	25	32	41	312	0	0	100	180000

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905  
900

FIGURE 9

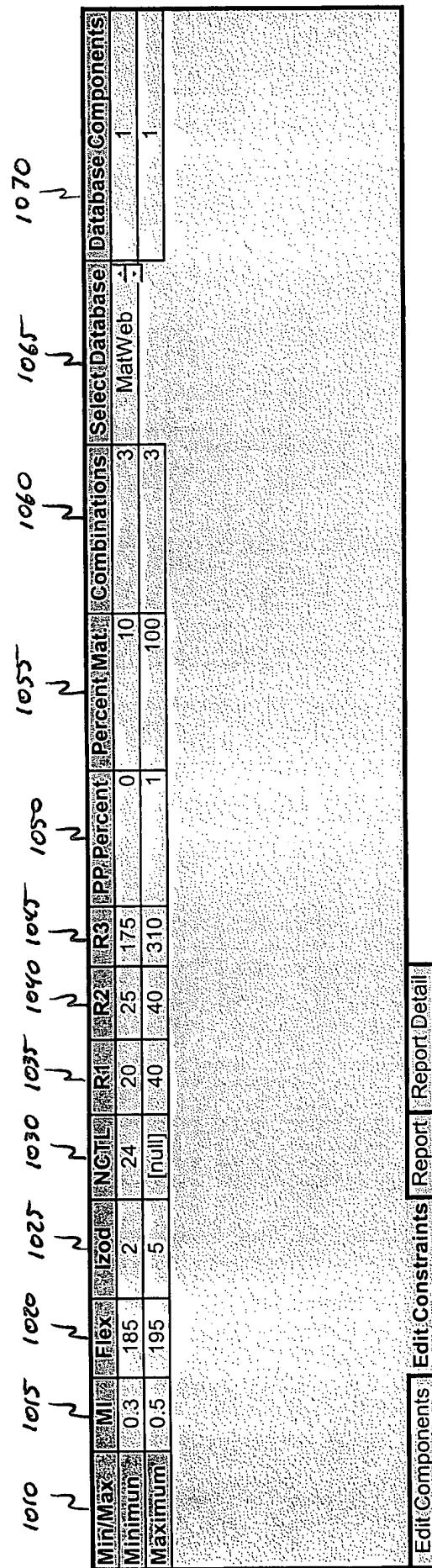


FIGURE 10

Solution	MI	Flex	NG1	NG2	R1	R2	R3	PP Percent	Cost	Blend Points
1	0.39	188	2.7	32	33.5	37.5	226	0	0.404	225028
2	0.347	185	2.8	37	36.3	37.7	214	0	0.406	225028
3	0.358	191	2.7	37	34.6	36.6	213	0	0.408	225028
4	0.382	185	2.4	30	21.5	32.6	295	0	0.427	132498

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1105

Figure 11

1210

1230

1235

1235

Solution 1		ID	Material Type	Vendor	Product	MI	Flex	R1	R2	R3	PP Percent	Cost	Available	Used	Lbs	Remaining	Lbs	Percentage
2	Prime	9656	0.46	201	2.1	27	15	30	306	0	0.43	900000	22503	67497	0	0	0	
1	Prime	249	0.34	139	3.2	25	32	41	312	0	0.41	180000	22503	157497	0	0	0	
A	WebBuy	3452	0.39	192	2.7	34	36	38	206	0	0.40	180000	180000	0	0	0	80	

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FIGURE 12

ID	Material Type	Vendor	Product	MI	Flex	Izod	NGI	R1	R2	R3	RPP Percent	Min Percent	Max Percent	Available lbs	Cost	
1	Prime	Equistar	4689	0.14	1.78	3	102	43	32	180	0	0	0	100	180000	0.45
2	Prime	CPChem	9656	0.46	201	2.1	27	15	30	306	0	0	0	100	90000	0.43
3	Prime	Exxon	249.73	0.34	139	3.2	25	32	41	312	0	0	0	100	180000	0.41

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Figure 13

Figure 14

1410

Min/Max	M1	Flex	I20	NGTL	R1	R2	R3	PP Percent	Percent Material	Combinations	Desired Blend Cost
Min/Un	0.3	185	2	24	20	25	175	0	10	3	0.4275
Maximum	0.5	195	5	[null]	40	40	310	1	100	3	

1406

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ID	Material Type	Vendor	Product	Min	Flex	Max	NC1	IR1	IR2	IR3	PP Percent	Min Percent	Max Percent	Available
2A	Prime	Dow	5109	0.31	189	2	88	32	37	183	0	0	100	180000

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1500



Figure 15

FIGURE 16



A screenshot of a software interface for a blending or optimization problem. The interface includes a table of data, a menu bar, and a toolbar.

**Table Data:**

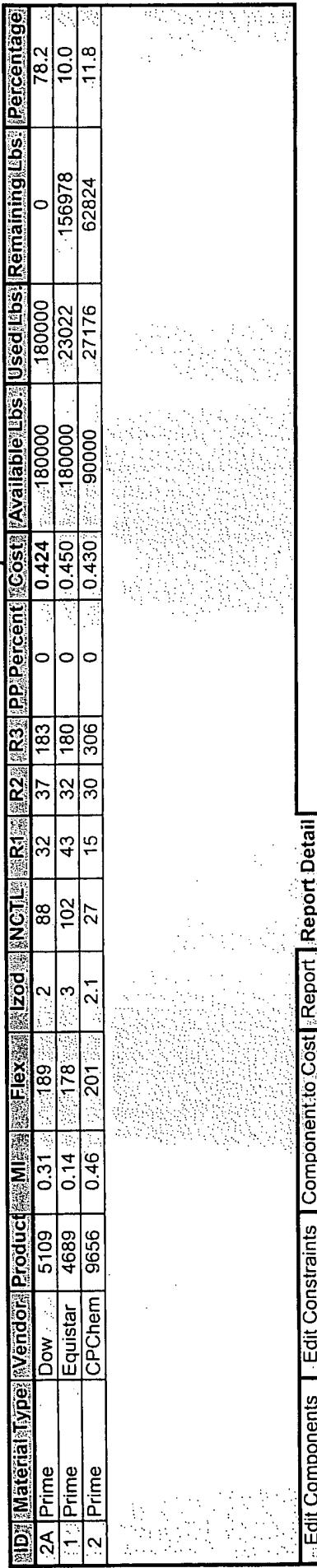
Solution	M1	Flex	Zod	NGL	R1	R2	R3	PP Percent	Cost	Blend Pounds
1	0.3	189	2.1	78	35.8	35.7	197	0	0.4275	230221

**Menu Bar:**

- File
- Help

**Toolbar:**

- Edit Components
- Edit Constraints
- Component to Cost
- Report
- Report Detail



ID	Material Type	Vendor	Product	MIL	Flex	R1	R2	R3	PP	Percent	Cost	Available lbs	Used lbs	Remaining lbs	Percentage	
2A	Prime	Dow	5109	0.31	189	2	88	32	37	183	0	0.424	180000	180000	0	78.2
1	Prime	Equistar	4689	0.14	178	3	102	43	32	180	0	0.450	180000	23022	156978	10.0
2	Prime	CPChem	9656	0.46	201	2.1	27	15	30	306	0	0.430	90000	27176	62824	11.8

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Figure 17